

REMARKS

Claims 1-90 remain pending in the application. Reconsideration is respectfully requested in view of the following remarks.

Section 102(b) Rejection:

The Examiner rejected claims 1-90 under 35 U.S.C. § 102(b) as being anticipated by Stoevhase (U.S. Patent 5,805,924) (hereinafter, “Stoevhase”). Applicant traverses this rejection for at least the following reasons.

With respect to claim 1, Stoevhase fails to teach all of the limitations of Applicant’s claim. Specifically, Stoevhase fails to teach a host system receiving from a fabric coupled to the host system an event indicating a fabric state change for one or more host adapter ports of the host system; and the host system dynamically changing the host system’s fabric device configuration in response to receiving the event, where the host system dynamically changing its fabric device configuration comprises the host system bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system.

Applicant notes that claim 1 recites various actions that are taken by a host system with respect to a fabric to which the host system is coupled. By contrast, the disclosures of Stoevhase operate solely within a fabric, and have nothing to do with altering a configuration of a host system coupled to a fabric. Specifically, the teachings of Stoevhase concern distribution of service parameters among switches included within a fabric as well as partitioning of address ports within the fabric (col. 1, lines 8-12). Applicant notes that at col. 4, lines 20-25 and at col. 29, lines 40-45, Stoevhase notes that a fabric element (e.g., fabric element 132 of FIG. 14) may include F_ports that may be coupled to a device other than a fabric element, such as a “computer or peripheral” that may be coupled to the fabric. However, Stoevhase offers no further discussion of any

aspect of the behavior of a host system that may be coupled to the fabric, such as may occur in response to a fabric state change event as recited in claim 1.

In regard to a host system receiving from a fabric coupled to the host system an event indicating a fabric state change for one or more host adapter ports of the host system, the Examiner asserts Stoevhase's system manager and DSP requests are equivalent to the host system and events of claim 1, respectively. The Examiner's interpretation is simply incorrect. The concept of a host system in storage networks is well understood in the art. No one of ordinary skill in the art would consider Stoevhase's system manager fabric element to be a host system. Stoevhase's discussion of DSP request processing clearly indicates that DSP requests are generated by a given fabric element for each of its associated E_ports (col. 5, lines 1-11; col. 6, lines 1-29; col. 20, lines 28-55; FIG. 11, block 100). However, as shown in FIGs. 1 and 14 and described at col. 4, lines 4-19 and col. 29, lines 40-45, E_ports are specifically provided for coupling fabric elements to one another, while F_ports are provided for coupling fabric elements to other devices external to the fabric. Stoevhase provides no suggestion whatsoever for conveying a DSP request to a device external to a fabric much less the system manager. Thus, the system manager of Stoevhase is not a host system and does not receive a fabric state change event and does not dynamically change its own fabric device configuration in response to receiving the event.

Moreover, Stoevhase clearly states that the purpose of the DSP request is to reconcile service parameters among fabric elements themselves (col. 2, lines 13-41). In view of this object, it is unclear from Stoevhase's disclosure how the DSP request, as a technique for maintaining service parameter consistency within the elements comprising a fabric, would in any way apply to those external devices or systems coupled to the fabric, such as a host system. As shown above, Stoevhase discloses that a recipient of a DSP request generated by a fabric element is not a host system, but rather another fabric element. By extension, the activity that occurs in response to the DSP request is not changing the host system's fabric device configuration, as required by claim 1, but rather

changing the service parameters of the fabric element (FIG. 11, blocks 101-105; col. 20, lines 28-55).

In the response to arguments section, the Examiner asserts that the Applicants argue in substance that the prior art does not disclose “a DSP request is received by a host system coupled to the fabric.” However, Applicant does not merely argue that Stoevphase does not disclose a DSP request is received by a host system. Instead, Applicant’s arguments include the fact that Stoevphase fails to teach or suggest a host system according to **all** of the limitations of claim 1. Furthermore, the Examiner cites Figure 11, step 110-111 and a portion of the associated description that states “the host waits for another DSP request.” The associated description in column 21, lines 36-39 is reproduced below:

After sending the IE_ACC data frame at step 119, the method returns to step 110 wherein the timer is set and the host waits for another DSP request, or detection of the stable condition.

However, the Examiner has misinterpreted the citation. The “host” in column 21, lines 36-39 is not a host system as recited in claim 1. Instead, the host described is a fabric element as described in column 20, lines 28-55 reproduced below:

FIG. 11 is a flowchart of one method for implementing the DSP procedure within each fabric element. This flowchart is provided merely for illustrative purposes, and it should be understood that the DSP procedure can be implemented in a number of other ways. As discussed above, the DSP procedure does not require synchronization between the fabric elements. Thus, when the method begins at initialization, it can respond to DSP request from another fabric element as shown in step 101, or can initiate its own DSP request as shown in step 100, depending on the relative timing of the initialization of the fabric elements. When a DSP request is received prior to the host fabric element initiating its own DSP request, the method proceeds to step 102 wherein the service parameters of the host fabric element are compared with those of the DSP requester. In step 103, a determination is made as to whether the service parameters of the host fabric element should be updated as a result of the DSP request. When no updating is required, the method proceeds to step 105 wherein an IE_ACC data frame is sent specifying the service parameters of the host fabric element. When it is determined at step 103 that the service parameters of the host fabric element should be updated, the method proceeds to step 104 wherein the updating occurs. The method

then proceeds to step 105 wherein an IE_ACC data frame is sent to the requesting fabric element specifying the updated service parameters of the host. The method then returns to the initial stage, wherein it can respond to another DSP request, or can initiate its own DSP request in step 100.

Thus, the “host” cited by the Examiner is a fabric element in which the method of FIG. 11 may be performed. Even though a fabric element may be referred to as a “host fabric element” by Stoevhase, the host fabric element does not teach or suggest a host system according to claim 1. One of ordinary skill in the art of storage networks easily understands the difference between a host fabric element as in Stoevhase and a host system couple to a fabric as recited in claim 1. More specifically, the host fabric element of Stoevhase **is not** a host system that dynamically changes its own fabric device configuration in response to receiving an event where dynamically changing includes the host system bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system.

As recited in claim 1, bringing fabric devices online or taking fabric devices offline are actions performed by the host system on the host system's fabric device configuration for the host system's adapter ports. Stoevhase fails to teach or suggest, in the cited art or elsewhere, a host system that dynamically changes its own fabric device configuration including bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system according to claim 1. Instead, Stoevhase describes reconciling service parameters among fabric elements (switches). Stoevhase describes the service parameters in column 9, lines 1-20 reproduced below:

The fabric-wide service parameters are established to be the same for every fabric element belonging to a single fabric. The fabric-wide service parameters are simultaneously determined using the DSP procedure described above in connection with the illustrative example of how the fabric name is determined. In addition to the fabric name, one illustrative embodiment of the present invention employs the following four additional fabric-wide service parameters: (1) minimum and maximum Error Detect Time Out Values (min. and max. E. D. TOV); (2) Maximum Round-Trip Time Value (MRTT); (3) minimum and maximum Resource Allocation Time Out Values (min. and max. R. A. TOV); and (4) minimum and maximum Buffer-to-Buffer Receive Data Field Size values. The timer values and limits on the data field size are defined by the Fibre Channel standard set out in the FC-PH document. The timers may have

many uses. A brief description of the timer values and illustrative uses are provided below. It should be understood that these descriptions are not complete and are provided merely for illustrative purposes. (emphasis added)

Stoevhase clearly describes the service parameters that may be changed as name, time out, or data field size values. However, reconciling service parameters among fabric elements by changing name, time out, or data field values is clearly not the same as dynamically changing a host system's fabric device configuration including bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system. Since Stoevhase fails to teach or suggest a host system according to the specific limitations of claim 1, Stoevhase cannot be said to anticipate claim 1.

The Examiner further asserts in the response to arguments section that Applicants argue in substance that “the activity is not changing the host system’s fabric device configuration.” However, Applicants do not merely argue that the activity is not changing the host system’s fabric device configuration. Instead, Applicants argue that Stoevhase fails to teach all of the limitations of claim 1 including a host system as claimed and dynamically changing the host system’s fabric device configuration as claimed. The Examiner cites column 6, line 60 – column 7, line 6 reproduced below:

If a device connected to a fabric element port becomes inactive or is removed from the system, the system manager has the option of altering the service parameters of the fabric element port. If a device is being moved temporarily, the system manager may choose to leave the service parameters of its [the device's] associated fabric element port unchanged, so that it will not be necessary to invoke the DSP procedure, which could potentially alter the system's service parameters and require taking at least some of the system devices off-line for reinitialization. However, if for any reason the system manager determines that it is desirable to update the service parameters of the fabric element port associated with the device, he may do so, triggering operation of the DSP procedure.

The citation explains that if a device becomes inactive or is removed from the system, the system manager may decide whether the service parameters of the associated fabric element port should be updated. However, as taught by Stoevhase, the fabric element is not a host system coupled to a fabric, but instead is a switch element of the fabric as

would be understood by anyone of ordinary skill in the art. Even were the system manager to update the service parameters of the fabric element port, the update would in no way dynamically change a host system's fabric device configuration as required by the limitations of claim 1. Furthermore, as argued above, Stoevhasse teaches reconciling service parameters among fabric elements by changing name, time out, or data field values which is not the same as dynamically changing a host system's fabric device configuration by bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system.

As Stoevhasse clearly fails to teach all of the limitations of claim 1, Stoevhasse cannot be said to anticipate claim 1. For at least the reasons given above, Applicant submits that the rejection of claim 1 is not supported by the cited art. The same is true in regard to the rejection of independent claims 31 and 61 that recite limitations similar to claim 1. Additionally, Applicant notes that the rejection of numerous ones of the dependent claims is further unsupported by the cited art. However, since the rejection has been shown to be unsupported in regard to the independent claims, further discussion of the dependent claims is unnecessary at this time.

Section 103(a) Rejection:

The Examiner rejected claims 1-90 under 35 U.S.C. § 103(a) as being unpatentable over Boggs, et al. (U.S. Patent 6,081,812) (hereinafter "Boggs") in view of Stoevhasse (U.S. Patent 5,805,924). Applicants traverse the rejection for at least the following reasons.

With respect to claim 1, Boggs in view of Stoevhasse fails to teach all of the limitations of Applicant's claim. Specifically, Boggs in view of Stoevhasse fails to teach a host system receiving from a fabric coupled to the host system an event indicating a fabric state change for one or more host adapter ports of the host system; and the host system dynamically changing the host system's fabric device configuration in response to receiving the event, where the host system dynamically changing its fabric device

configuration comprises the host system bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system.

The Examiner admits that Boggs fails to teach or suggest that the host system dynamically changing its fabric device configuration includes the host system bringing online or taking offline one or more fabric devices for the one or more host adapter ports of the host system. Thus, the Examiner relies on Stoevhasse to teach this limitation. However, Stoevhasse fails to teach or suggest a host system dynamically changing its fabric device configuration including the host system bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system. As shown in detail above in regard to the § 102 rejection, the disclosures of Stoevhasse operate solely within a fabric, and have nothing to do with altering a configuration of a host system coupled to a fabric as would be easily understood by anyone of ordinary skill in the art.

Even if the teachings of Stoevhasse were applied to the system of Boggs, such a combination would at most result in applying the fabric element configuration teachings of Stoevhasse to the fabric 106 in Boggs system. Such a modification would only affect the operation of Boggs' fabric 106 and would have absolutely no effect on the configuration of Boggs' compute nodes. The teachings of Stoevhasse pertain to the distribution of service parameters among switches included within a fabric as well as partitioning of address ports within the fabric. The only portion of Boggs' system for which these teachings would apply is the fabric 106. Boggs' compute nodes have nothing to do with the fabric switch service parameters that are the focus of Stoevhasse's teachings. Thus, the Examiner's proposed combination clearly would not result in a host system dynamically changing its fabric device configuration including the host system bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system.

Furthermore, Applicants assert the Examiner has not stated a proper reason to combine the teachings of Boggs with the teachings of Stoevhasse. The Examiner

asserts it would have been obvious to combine the teachings of Stoevhase with the teachings of Boggs for the purpose of providing the up-to-date view of the IONSs 212. However, this is simply a reason to use Boggs system, not to modify Boggs' system according to Stoevhase.

The Examiner also states that Stoevhase suggests that the system manager desires to update the service parameters of the fabric element. However, this is exactly Applicant's point. Stoevhase's teachings would only apply to fabric elements of Boggs' fabric 106, not to Boggs' compute nodes. Moreover, as shown above, Stoevhase's teachings do not have anything to do with dynamically changing a host system's fabric device configuration including bringing online or taking offline one or more fabric devices for the one or more host adapter ports for the host system.

As the Examiner is certainly aware, to establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). As shown above, the combination of cited art clearly would not result in all the limitations of claim 1. Moreover, the Examiner has not shown that one of ordinary skill in the art would have been motivated to make the modification to the art proposed by the Examiner.

For at least the reasons given above, Applicant submits that the rejection of claim 1 is not supported by the cited art. The same is true in regard to the rejection of independent claims 31 and 61 that recite limitations similar to claim 1.

With respect to claim 6, Boggs in view of Stoevhase fails to teach or suggest the specific limitations of claim 6 including "if the event type indicates that one of the fabric host adapter ports has lost connectivity to the fabric, said dynamically

changing comprises accessing a configuration file for the host adapter port that lost connectivity to the fabric to determine if fabric devices for that host adapter port are to be unconfigured if that host adapter port loses connectivity to the fabric.”

The Examiner asserts Boggs and Stoevhave disclose the limitations of a claim 6. However, neither Boggs nor Stoevhave, taken singly or in combination, teach accessing a configuration file for a host adapter port that lost connectivity in order to determine if the fabric devices for that host adapter port are to be unconfigured. Furthermore, the cited portions of Stoevhave describe altering service parameters of fabric elements and have nothing to do with a host system accessing a configuration file as part of dynamically changing the host system’s configuration. Thus, for at least the reasons above, the rejection of claim 6 is unsupported by the cited art and removal thereof is respectfully requested.

With respect to claim 14, Boggs in view of Stoevhave fails to teach or suggest the specific limitations of claim 14 including “if the event type indicates that one of the fabric host adapter ports has acquired connectivity to the fabric, **said dynamically changing comprises accessing a configuration file for the host adapter port that has acquired connectivity to the fabric to determine if fabric devices for that host adapter port are to be configured if that host adapter port acquires connectivity to the fabric.”** The Examiner asserts Boggs and Stoevhave disclose the limitations of a claim 14. However, neither Boggs nor Stoevhave, taken singly or in combination, teach accessing a configuration file for a host adapter port that acquires connectivity in order to determine if the fabric devices for that host adapter port are to be configured. Furthermore, the cited portions of Stoevhave describe altering service parameters of fabric elements and have nothing to do with a host system accessing a configuration file as part of dynamically changing the host system’s configuration. Thus, for at least the reasons above, the rejection of claim 14 is unsupported by the cited art and removal thereof is respectfully requested.

With respect to claim 22, Boggs in view of Stoevhave fails to teach or suggest the specific limitations of claim 22 including “if the event type indicates that a new

fabric device has been connected to the fabric, said dynamically changing comprises accessing a configuration file for one of the one or more host adapter ports to determine if newly connected fabric devices for that host adapter port are to be dynamically configured.” The Examiner asserts Boggs and Stoevhave disclose the limitations of a claim 22. However, neither Boggs nor Stoevhave, taken singly or in combination, teach accessing a configuration file for a host adapter port order to determine if newly connected fabric devices for that host adapter port are to be dynamically configured. Furthermore, the cited portions of Stoevhave describe altering service parameters of fabric elements and have nothing to do with a host system accessing a configuration file as part of dynamically changing the host system’s configuration. Thus, for at least the reasons above, the rejection of claim 22 is unsupported by the cited art and removal thereof is respectfully requested.

Applicant notes that the rejection of numerous ones of the dependent claims is further unsupported by the cited art. However, since the rejection has been shown to be unsupported in regard to the independent claims, further discussion of the dependent claims is unnecessary at this time.

CONCLUSION

Applicants submit the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-83600/RCK.

Also enclosed herewith are the following items:

- ☐ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Notice of Change of Address
- ☐ Other:

Respectfully submitted,

/Robert C. Kowert/

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